REMARKS

In the Office Action dated May 12, 2010, claims 27, 28 and 47-49 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenberg.

Applicants note with appreciation the telephone interview courteously afforded the undersigned representative of the Applicants on August 3, 2010, in which the above rejection was discussed, The Examiner's Supervisor, Mr. Carl Layno, also participated in the telephone interview.

As discussed in the telephone interview, it is the position of the Applicants that the Rosenberg reference is not concerned at all with diagnosing diastolic heart failure (DHF), and in fact is not a diagnostic system at all, but is a pacemaking system that is used *after* a patient has already been diagnosed with congestive heart failure (CHF). As explained in the introductory portion of the Rosenberg reference, a symptom of CHF is that the ventricles fill with blood non-uniformly from cardiac cycle-to-cardiac cycle, and thus the emission of a stimulation pulse at the appropriate time to cause emptying of one or both ventricles is problematic. The solution to this problem disclosed in the Rosenberg reference is to physically measure the volume of the ventricle during diastole and, when the measured volume reaches a predetermined value, it is assumed that the ventricle has filled with blood and thus it is appropriate to cause emission of a stimulation pulse that will cause emptying of the ventricle. The actual time duration that is required for the ventricle to actually fill with blood is not relevant with regard to this measurement, it is only a measurement as to when a particular volume of the ventricle has occurred. This is why the various types of sensors that are disclosed in the Rosenberg reference are not capable of measuring time, but are instead sensors such as strain gauges and

the like. The only mention of time in the Rosenberg reference in the context of making such a measurement is in the embodiment wherein an ultrasound detector is used to measure wall thickness of one of the walls of the ventricle, in which case the propagation time, or the time of flight, between the transmitted and received ultrasound signals is relevant. This measured time, however, is not an intrinsic time associated with the heart, but is a time associated with the transmitted and received ultrasound signals.

By contrast, the subject matter disclosed and claimed in the present application is, in fact, a diagnostic tool that generates a signal that identifies the existence of a state of DHF, in order to make a diagnosis. It is true that in some embodiments the signal can also then be used to control the emission of stimulation pulses in a pacemaker, but it is still the case that the generated signal indicates DHF, and the control of the stimulation pulse emission that subsequently ensues is dependent on this initial identification of the existence of DHF.

As noted above, by contrast, the procedures disclosed in the Rosenberg reference all follow *after* the patient has already been diagnosed as suffering from CHF. If this diagnosis has not already been made, there would be no need to use the elaborate detection and pacing procedures disclosed in the Rosenberg reference; standard or conventional pacing could be used instead.

This is also why, in the language of each of the independent claims, it is stated that a time duration is measured, and this time duration is only a predetermined phase of diastole of the heart. In the telephone interview, Applicants' representative explained that this was intended to mean that the time duration of

only a portion of the total diastolic phase of the heart is measured, as exemplified by claim 29 which describes different events that define the measured time duration.

The Examiner, in response, stated that the term "phase of diastole" used in the previous claim language could be interpreted as meaning the entire diastolic phase (as opposed to the systolic phase) of the heart. It was therefore agreed in the telephone interview that each of the independent claims would be amended to make clear that the time duration that is measured is only a time duration between predetermined diastolic events in the diastolic phase, and that the time duration between these predetermined events does not represent the entirety of the diastolic phase. It was agreed in the telephone interview that amending the claims in this manner would distinguish the claims over the teachings of the Rosenberg reference.

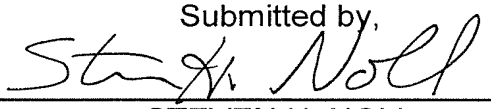
Claim 29-43 and 50-63 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenberg in view of Salo et al. Claims 44-46 were rejected under 35 U.S.C. §103(a) as being unpatentable over Rosenberg and Salo et al., further in view of Paul et al. Although those rejections were not specifically discussed in the telephone interview, Applicants submit that the arguments discussed in the telephone interview are applicable to those rejections as well. For those reasons, as summarized above, even if the Rosenberg reference were further modified in accordance with the teachings of Salo et al. and/or Paul et al., the subject matter of the aforementioned dependent claims still would not result.

In the telephone interview, both the Examiner and his supervisor stated that making the aforementioned changes in the language of the independent claims would raise a new issue requiring further searching or consideration, and therefore such an Amendment could not be entered at this stage of prosecution, after the Final

Rejection. This Amendment is therefore accompanied by the filing of an RCE, and entry and consideration of the Amendment are respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment to account No. 501519.

Submitted by,



(Reg. 28,982)

STEVEN H. NOLL
SCHIFF, HARDIN LLP
CUSTOMER NO. 26574
Patent Department
Suite 6600
233 South Wacker Drive
Chicago, Illinois 60606
Telephone: 312/258-5790
Attorneys for Applicants.

CH2\8948787.1